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Project Notification Form

DANA-FARBER CANCER INSTITUTE NEW RESEARCH BUILDING

65 DEACONESS ROAD
BOSTON, MASSACHUSETTS 02115

May 1993

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Submitted To:

Boston Redevelopment Authority
1 City Hall Square
Boston, Massachusetts 02201

Submitted By:

DANA-FARBER
CANCER INSTITUTE
44 Binney Street
Boston, MA 02115

HMM Associates, Inc.
A Summit Company

Dana-Farber Cancer Institute
New Research Building

Project Notification Form

May 1993

Submitted To:

Boston Redevelopment Authority
1 City Hall Square
Boston, Massachusetts 02201

Submitted By:

Dana-Farber Cancer Institute
44 Binney Street
Boston, MA 02215

Prepared By:

HMM Associates, Inc.
Environmental Consultants, Engineers & Planners
196 Baker Avenue
Concord, MA 01742

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I. SUMMARY

A. Project Identification

1. *Project Name*

   - Dana-Farber Cancer Institute
     New Research Building

2. *Address/Location:*

   - 65 Deaconess Road
     Boston, Massachusetts 02115

3. *Property Owner:*

   - Dana-Farber Cancer Institute, Inc.
     44 Binney Street
     Boston, Massachusetts 02115

4. *Owner's Representatives:*

   - Mr. John W. Pettit
     Chief Administrative Officer
     Dana-Farber Cancer Institute
     44 Binney Street
     Boston, Massachusetts 02215

   - Mr. Thomas McNamara
     Director of Support Services
     Dana-Farber Cancer Institute
     44 Binney Street
     Boston, Massachusetts 02115

5. *Legal Counsel:*

   - Mr. Brian S. Meyer, Esquire
     Dana-Farber Cancer Institute
     44 Binney Street
     Boston, Massachusetts 02115

6. *Architect:*

- Shepley Bulfinch Richardson and Abbott
  40 Broad Street
  Boston, Massachusetts 02109

  Oliver Egleston
  Malcolm Kent

7. *Environmental and Transportation Consultant:*

- HMM Associates, Inc.
  196 Baker Avenue
  Concord, Massachusetts 01742

  Mitchell L. Fischman, AICP
  Jill H. Fox
  Barry Porter, AICP

8. *Wind Consultant:*

- Frank Durgin
  c/o Wright Brothers Wind Tunnel
  Building 17-110
  Massachusetts Institute of Technology
  Cambridge, Massachusetts 02139

9. *Mechanical and Electrical Engineer:*

- Syska and Hennessy,Inc.
  11 West 42nd Street
  New York, New York 10036

  Mark Yakren

10. *Structural Engineer:*

- Zaldastani Associates, Inc.
  7 Water Street
  Boston, Massachusetts 02109

  Alan Simon

11. *Geotechnical Engineer:*

- GEI Consultants, Inc.
  1021 Main Street
  Winchester, Massachusetts 01890

12. *Estimated Start and Completion Dates:*

- Start Date: March 1994

- Completion Date: March 1997

13. *Estimated Total Project Cost:*

- Approximately $106,000,000

14. *Project Design Status:*

- Schematic Design Phase

15. *Article 31, Boston Zoning Code:*

- This project does not fall under the Boston Redevelopment Authority's jurisdiction for development review, pursuant to Article 31 of the Boston Zoning Code. This Project Notification Form is being submitted voluntarily, for informational purposes, at the request of the Boston Redevelopment Authority, in order to provide a summary of the project and its impacts.

B. Narrative Project Description

To meet the growing needs of its research program, the Dana-Farber Cancer Institute, Inc. and its parent corporation, Dana-Farber, Inc., propose to construct a new building for cancer and other bio-medical research. The new building is to be built at 65 Deaconess Road, on the Frederika site at the corner of Binney Street and Deaconess Road. In addition to research, the building will house some office and research support space and parking below-grade. The Dana-Farber Cancer Institute will lease part of the building to a neighboring institution, which will occupy approximately one-third of the research space and one-fifth of the below-grade parking.

The Frederika site is bounded by Deaconess Road, Binney Street, the Medical Area Total Energy Plant (MATEP), Dana-Farber's 464 Brookline Avenue building and Childrens Hospital's 454 Brookline Avenue building and parking lot. The existing, on-site Frederika building is currently used for approximately 7,000 gross square feet of Dana-Farber research and administrative space. Parking for 58 cars is also located on-site. Current access to the parking lot and the Frederika building is from Deaconess Road. The site is approximately 27,400 square feet in size.

The Research Building will have a gross floor area (for FAR* purposes pursuant to the Boston Zoning Code) of about 266,100 gsf in a building 14 stories above-grade, with a garage containing five parking levels below-grade. The height of the building will be approximately 194 feet above-grade. The five below-grade parking levels will provide space for 261 vehicles. Access to the parking garage will be from Deaconess Road.

The Research Building program is presented in Table 1. The ground floor (Level 1) will contain the entrance to the Research Building, a public lobby, conference space, loading and receiving functions and mechanical space. There will be 12 floors of research, office, and support services space and two floors devoted to mechanical equipment. The Dana-Farber Cancer Institute will occupy seven floors of research and office space plus the ground floor lobby and four below-grade parking levels. The leased space will include four floors for research space and one below-grade parking level.

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* FAR = Floor Area Ratio

Table 1: Proposed Program Summary
New Research Building/Dana-Farber Cancer Institute

Floor Level	Proposed Use	FAR Gross Square Feet Dana-Farber Research	Tenant	Total
1	Receiving/Mech/Lobby	5,300	--	5,300
2	Research Support	26,900	--	26,900
3	Offices	26,900	--	26,900
4	**Mechanical**	--	--	--
5	Laboratory	23,000	--	23,000
6	Laboratory	23,000	--	23,000
7	Laboratory	23,000	--	23,000
8	Laboratory	23,000	--	23,000
9	Laboratory	23,000	--	23,000
10	Laboratory	--	23,000	23,000
11	Laboratory	--	23,000	23,000
12	Laboratory	--	23,000	23,000
13	Laboratory	--	23,000	23,000
14	**Mechanical**	--	--	--
TOTAL		174,100 gsf	92,000 gsf	266,100 gsf

Parking

Level P5	38 Cars
Level P4	58 Cars
Level P3	58 Cars
Level P2	58 Cars
Level P1	49 Cars
TOTAL	261 Cars

In addition, a cooling tower is being planned as a part of the roof-top mechanicals which supports the new chilled water plant being proposed for the project. The chilled water plant is currently proposed to be located on the ground floor. The cooling tower will include four cells on the roof-top.

During most of the year, the chiller will run at reduced load, with all four cells operating only during peak summer periods. The precise configuration of the cooling tower has not yet been determined.

The Research Building will be connected to the existing Dana Building across Deaconess Road at the second and third levels. There will also be a bridge across Binney Street at the second level, connecting the Research Building to Brigham and Women's Hospital. These connections, as well as those from the existing Dana Building, are necessary to unite cancer research and treatment at the various nearby institutions, and to promote interaction between researchers and clinicians within Dana-Farber.

C. Project Benefits

The Project will benefit the City of Boston by enhancing the expertise and reputation of the Institute by permitting growth. It will ensure the long term viability of the Institute and allow the Institute to continue as a provider of jobs and critical technology. The Project will also enable the Institute to attract the highest quality researchers and clinicians to continue and expand the research programs for which the Institute is well known. The contribution which the Institute makes to the community through improved diagnosis and treatment of cancer is immeasurable and widely recognized.

Biotechnology has been identified as one of the most important and economically significant technologies of the future. Both the City and State governments have indicated their interest in fostering the development of this technology.

Development Impact Project Contribution

The project constitutes a Development Impact Project, as that term is defined in Sections 26-26B of the Zoning Code. Dana-Farber Cancer Institute will provide linkage contributions to the City of Boston, as applicable. These linkage contributions will aid in the development of affordable housing and job training and will be made in accordance with the terms of an agreement to be entered into between the BRA and the Institute.

Community Service

In addition to the importance of its research and of biotechnology as an engine of economic growth, the Institute has provided or participated in a number of community programs:

- *Free Care* - In 1992, the Institute provided over $1,574,000 of free care to patients. In addition, the Institute paid $1,964,000 into the State free care pool. The Institute thus provided over $3,538,000 of free care last year.

- *Neighborhood Health Centers* - Last year, the Institute contributed approximately $68,000 to neighborhood health centers.

- *Neighborhood Housing Services* - The Institute has contributed to Mission Hill Neighborhood Housing Services.

- *Mission Hill/Fenway Food Project* - The Food Project is a group effort of representatives from institutions in the Longwood Medical Area who raise funds for the area food pantries and community groups. The Institute participates by conducting food drives twice a year and donating the food to a local food pantry.

- *Cancer Information Service* - This is an information and referral service which provides accurate and up-to-date information on cancer to patients and their families, health professionals and the general public. The service also sponsors a smoking cessation program which is available to the general public.

- *Physician Outreach* - Institute physicians travel to community hospitals to inform physicians and clinical staff of the latest developments in cancer and diagnosis, treatment, clinical protocols and investigative drugs.

- *Social Services* - The Institute's social services staff provides guidance to low income patients and families as to the availability of public and Institute programs which provide aid. The staff also provides help in locating short and long term housing for those who need it and provides community-based resources and support groups for patients and their families.

- *United Way* - The Institute conducts a vigorous campaign to raise funds for United Way. The most recent campaign raised in excess of $35,000.

- *Boston Committee on Access to Health Care (Mayor's Health Line)* - The Institute is a contributor to the Boston Committee on Access to Health Care, which is designed to help people with low incomes and little or no insurance coverage to access the health care that they need.

- *Student Internship Program* - The Institute places college and some high school students in unpaid laboratory, administrative and clinical positions to provide them with work experience in a laboratory setting.

- *One With One* - The Institute participates in this program which provides office and computer experience to those who need an opportunity to transition into a medical office environment.
- *Jewish Vocational Services* - Through the Jewish Vocational Services,the Institute provides opportunities for immigrants to familiarize themselves with English terminology and computer techniques.
- *Job Publication* - The Institute posts all its jobs and sends the list to 175 public agencies and schools so as to offer available jobs to as large a pool of candidates as practicable.
- *Employment* - The Institute employs 1,843 individuals, of whom 507 employees are Boston residents of which 60 reside in nearby Mission Hill and Jamaica Plain neighborhoods.
- *Community Purchasing* - The Institute participates with other institutions in the MASCO effort to support purchasing from community businesses.

D. Status of Master Plan and Area-Wide Planning Coordination

The Dana-Farber Cancer Institute is in the process of completing an Institutional Master Plan for the year 2003. This will be submitted to the BRA in the near future. Dana-Farber is a member of the Medical Academic & Scientific Community Organization, Inc. (MASCO), and this proposal has been integrated into MASCO's future planning.

E. Public Agencies

The following is a list of Federal, State and local agencies from which permits or other actions are anticipated to be sought. Other permits may be added following completion of design development plans. (Please note that the permits/actions listed below will be filed unless further analysis indicates that a particular permit or action is not required.)

Agency Name	Anticipated Permit or Action
Federal	
Environmental Protection Agency	Pre-Asbestos Removal Notice NPDES Permit for Dewatering Discharge NPDES Stormwater Discharge Permit

Agency Name	Anticipated Permit or Action
State	
Executive Office of Environmental Affairs/MEPA Unit	Certificate of Compliance Environmental Notification Form
Department of Environmental Protection	
- Division of Air Quality Control	Pre-Demolition Notice Pre-Asbestos Removal Notice Pre-Construction Notice Vent Hoods for Laboratory Space Permit
- Division of Water Pollution Control	Sewer Connection/Extension Permit
- Division Of Water Supply	Water Supply Permit
Massachusetts Water Resources Authority	Sewer Use Discharge Permit
Department of Labor and Industries	Asbestos Removal Permit
Local	
Boston Redevelopment Authority/ Boston Zoning Commission	Article 31 Development Review Zoning Sub-district or Other Zoning Relief Institutional Master Plan Approval Development Impact Project Plan and Agreement Cooperation Agreement Boston Residents Construction Employment Plan First Source Agreement
Boston Transportation Department	Transportation Access Plan Construction Traffic Management Plan
Boston Water and Sewer Commission	Water and Sewer Tie-In Approval Discharge Permit for Dewatering

Agency Name	Anticipated Permit or Action
Local (Continued)	
Boston Inspectional Services Department	Demolition Permit Earth Removal Permit Building Permit
Boston Licensing Board	Storage of Flammables and Chemicals
Boston Air Pollution Control Commission	Construction Noise Regulations Compliance
Public Improvements Commission	Access to Project Over a Public Way Approval for Bridge Connections

F. List of Any Zoning Relief Sought

Dana-Farber is in discussions with the BRA as to whether a zoning sub-district for the site will be created, or whether variance or conditional use permits will be sought for the project.

G. Governmental Agencies or Programs from which Financial Assistance for Project is Being Sought

Health Educational Facilities Authority (HEFA) bond financing is expected to be obtained for the project.

II. PROJECT DESCRIPTION

A. Location Map, Site Plan, Floor Levels and Building Section

The following Exhibits found at the end of this document show the physical aspects of the project:

Exhibit 1 - New Research Building Location Map

Exhibit 2 - Existing Site Plan

Exhibit 3 - Site Plan for New Research Building

Exhibit 4 - North-South Section

Exhibit 5 - Level 1 Floor Plan

Exhibit 6 - Level 2 Floor Plan

Exhibit 7 - Level 3 Floor Plan

Exhibit 8 - Typical Laboratory Floor Plan

Exhibit 9 - Typical Parking Plan

Exhibit 10 - Perspective from Brookline Avenue

B. Dimensions

1. *Existing Ownership/Land Uses/Building Occupancies*

The project site is owned by the Dana-Farber Cancer Institute. The site is bounded on the northwest by Dana-Farber's 464 Brookline Avenue building and Childrens Hospital's 454 Brookline Avenue building and small surface parking lot. Northeast of the site is Deaconess Road; across Deaconess Road is the existing Dana Building. Southeast of the site is Binney Street; and across Binney Street is Dana-Farber's Jimmy Fund Building and the Brigham & Women's Hospital. On the southwest is the Medical Area Total Energy Plant (MATEP).

2. *Site Description*

The site consists of approximately 0.6 acres (27,400 sf) which currently includes one building (Frederika), and a surface parking lot for 58 vehicles. The Frederika building, built in the 1920s, and an accessory one-story, two-car garage used for storage, are the only existing site buildings. The Frederika

building is three stories and currently used for research and administrative offices by the Institute. Both Frederika and the one-story garage will be demolished to allow for construction of the new Research Building.

3. Building Height

The proposed Research Building will be 14 stories above-grade and include a garage in five below-grade parking levels. Total height above sidewalk will be approximately 194 feet.

C. Current and Proposed Uses and Areas

Currently, the site consists of one 3-story building containing 6,853 gross floor area and used for research and administrative offices, and a 58-car surface parking lot.

Proposed uses include a 14-story above-grade structure for laboratory research and five below-grade parking levels. The proposed area includes 266,100 gsf (FAR) of research and support space. The parking garage will be occupied by 261 parking spaces. Table 1 in the Narrative Project Description includes a breakdown of uses by floor.

III. ASSESSMENT OF DEVELOPMENT REVIEW COMPONENTS

A. Transportation Component

The project's development plans are being coordinated with MASCO's future plans and activities for the Longwood Medical Area.

The project will include construction of a new 261-space parking garage, replacing 58 spaces on-site. However, since other on-going projects at the Dana-Farber Cancer Institute will result in the further elimination of existing on-campus parking spaces, the net increase in on-campus parking with completion of the Research Building is only 138 spaces. It is expected that the new parking garage will shift employee parking from the existing Dana Building garage, thus increasing the amount of patient parking within the existing Dana Building.

A scope of work for the Transportation Component will be developed after discussion with the BRA and Boston Transportation Department during the PNF review period. The Transportation Component will include four elements: traffic management, parking management, construction management and monitoring/mitigation measures. A complete Transportation Access Plan will be developed by HMM Associates, Inc., the traffic and environmental consultant for the project.

Due to its proximity to MBTA service, the Institute can be expected to maintain a favorable transit modal share (high public transit use), thus reducing single occupant vehicle use. The Transportation Access Plan will encourage the use of public transit, carpooling and bicycles. A secure bicycle storage area will be included in the building design.

B. Environmental Protection Component

1. Wind

The proposed research facility is consistent with the height of surrounding structures. A qualitative pedestrian-level wind analysis will be performed to categorize the existing and future wind environment with and without the proposed Research Building.

Currently, there is no place at the site or in its immediate surrounding area that has excessive pedestrian level winds (PLWs) (i.e., PLWs in Melbourne's Categories 1 or 2) or that exceeds the BRA guideline return period effective gust wind speed of 31 miles per hour once in 100 hours. With the addition of the Research Building, the site will remain generally sheltered from easterly storm winds and for southwest summer winds, but may experience some increased wind along Deaconess Road, under the proposed bridge connecting the Research Building to the existing Dana Building.

The Research Building may also improve some wind conditions by sheltering currently windy areas along Shattuck Street near its intersection with Binney Street.

2. *Shadow*

Preliminary shadow diagrams prepared by Project Architects, Shepley Bulfinch Richardson and Abbott, indicate that very little additional shadowing will occur in public areas with construction of the Research Building. The nearest public open space to the project is Joslin Park across Brookline Avenue, north of the project site. Shadow diagrams were prepared for June 21 at 9:00 am and Noon EDT, and for March 21 at Noon EST. In all cases evaluated, the project's new shading was confined to areas immediately adjacent to the site. From these results, it can be inferred that additional shadowing from the project will not affect Joslin Park during those seasons when it will be more heavily used.

3. *Daylight*

Some increase in daylight obstruction is likely with the Research Building, as the site is currently an open parking lot with a 3-story building.

4. *Solar Glare*

The proposed materials for construction of the Research Building should minimize solar glare. Materials under consideration at this time include stone cladding with glazing units in painted metal frames. In addition, energy code compliance will reduce the use of glass in the building, further reducing the potential for solar glare from the building.

5. *Air Quality*

An air quality analysis will be performed to assess the impacts of the project traffic and the proposed parking garage. The analysis will be conducted based on a modeling protocol to be developed by HMM Associates in cooperation with the DEP and BRA. Venting for laboratory spaces will be located to minimize air quality impacts.

6. *Water Quality*

The project will be constructed on a site which is currently impervious, containing a building and a paved parking lot. The site is currently served by BWSC stormwater and sanitary sewers. The Research Building will have separate stormwater and sanitary sewer connections. Runoff in the proposed below-grade parking garage will be routed through oil/water separators before discharging to the stormwater sewer system.

7. *Flood Hazard Zones/Wetlands*

The project site is paved and is not in a flood hazard area.

8. *Groundwater*

Geotechnical information for the area was obtained from several reports prepared previously by GEI Consultants, Inc. The boring information in these reports reviewed by GEI Consultants, Inc. indicates that groundwater can be found at El. 10 Boston City Base (BCB) in many locations in the area, or about 33 feet below the ground surface. However, groundwater in an observation well on the site itself, was measured at El. 20 to El. 23 feet by GEI in 1990. The ground surface at the site is at approximate El. 43 feet BCB and the bottom of the structure (Level P5) will be at approximate El. -10 feet. Dewatering will be required during construction activities. The slab of the building will be designed to resist water uplift pressures.

A new boring program is being conducted to verify and update the information presented above. Specific construction techniques necessary will be addressed in the Draft Project Impact Report (DPIR).

9. *Geotechnical*

The boring information reviewed by GEI Consultants, Inc. indicates that the upper soil at the site is fill to a depth of generally less than 10 feet. It consists of a heterogeneous mixture of silt, clay, sand, gravel, cinders, roots and rubble. The fill is generally underlain by stiff to hard clay that contains occasional seams of sand and silt. In some of the borings, a 10- to 20-foot layer of hard silt and dense silty sand was found above the clay. In the proposed building area, the clay appears to be underlain by a layer of sand, with the interface varying between approximate El. -25 and El. -5 feet. This sand may be pervious. The sand is discontinuous and was not observed in all the borings. The sand is underlain by glacial till at elevations ranging from -30 to -20 feet.

Based on the information available to date, no soft soils appear to be present under or adjacent to the site. The soils appear to be suitable for support of the building on a mat foundation. Temporary excavation support systems will be emplaced during construction to protect surrounding structures.

10. *Solid and Hazardous Waste*

An assessment of the site for the presence of oil and hazardous materials is currently being conducted. The assessment includes research on historical uses of the site, review of local and State regulatory files and laboratory analysis of soil samples recovered from test borings. No evidence of contamination was found in the soil field screening procedures.

Solid waste generated by the project is estimated to be approximately 355 tons per year. This figure is based on 1.33 tons per 1,000 sf. All waste will be removed by a licensed contractor. Laboratory waste will also be removed by a licensed contractor, as is currently done.

The building design will include storage space for recyclable materials. Dana-Farber currently conducts a recycling program to reduce the amount of solid waste generated by the Institute.

11. Noise

Temporary construction noise will comply with the City of Boston noise ordinance. Standard mitigation practices to reduce noise levels during construction will be implemented. Noise levels generated during operation of the Research Building will be typical of the area and should not create any adverse impacts. The proposed cooling tower is being designed to comply with City noise standards.

12. Construction

Construction on the Reserch Building is expected to begin in March 1994. A construction management plan will be prepared for submission to the Boston Transportation Department prior to construction. Construction vehicle traffic will be generated along Deaconess Road and Binney Street. Construction management and scheduling will aim to minimize impacts on the surrounding area. Plans for construction worker commuting and parking, routing plans for trucks and deliveries, and control of construction dust will be developed in the DPIR. Barricades, enclosures, walkways and signage will be used, as appropriate, to ensure the public's safety throughout construction of the project.

Appropriate noise controls, such as mufflers and enclosures, and fugitive dust controls, such as wetting down of the site and use of covered trucks to remove excavated spoils, will be used to minimize construction impacts.

13. Rodent Control

No rodent control problems are anticipated. A licensed exterminator will exterminate prior to, during, and after construction of the project.

C. Urban Design Component

The siting of the Research Building on an existing open parking lot will define the corner of Binney Street and Deaconess Road, being part of a larger block bounded by Binney Street, Francis Street, Brookline Avenue and Deaconess Road. It will also anchor the corner, establishing relationships with Dana-

Farber's Jimmy Fund Building across Binney Street and the Dana Building across Deaconess Road. The relationship between existing and proposed buildings will be reinforced by the existing and proposed overhead bridge connections across Binney Street and Deaconess Road. Dana-Farber will also have improved access to Brigham & Women's Hospital from the Research Building through an additional overhead connection across Binney Street.

The Research Building will be designed to be compatible in massing, scale and materials with nearby buildings. Its height and massing will relate to the adjacent Dana Building, Brigham & Women's Hospital and MATEP facilities, as well as other nearby buildings. The new structure will also mask MATEP's large northeast blank wall and mechanical equipment facing the site. Exterior materials will be consistent with other structures in the area. Materials under consideration at this time include stone cladding with glazing units in painted metal frames.

Close attention will be paid to the integration of the Research Building's entrance and the underground parking and the loading dock area off Binney Street with existing patterns of vehicular and pedestrian circulation. The new building will maintain the existing pathway between the site and the MATEP facility, which connects Brookline Avenue with Binney Street. In addition, sidewalk improvements are planned along Binney Street and Deaconess Road.

D. Historic Resources Component

The Research Building project will not impact any site or structure listed in the National Register of Historic Places or designated as a Boston Landmark. The existing on-site 3-story building is not a designated historic structure. It was a more recent cafeteria addition to the original Frederika Building, razed in 1979.

E. Infrastructure Systems Component

1. Sewage Generation

The site is currently served by separate BWSC sanitary and stormwater sewers which discharge to Deer Island and the Muddy River, respectively. The Research Building's sanitary wastewater will be separated from stormwater drains.

Sanitary sewage generation for the Research Building is estimated to be approximately 51,400 gallons per day (gpd), based on a 15% reduction of the water consumption estimates calculated for the Research Building. It is estimated that cooling tower blowdown will average an additional 10,000 gpd on an annual basis.

2. *Water Consumption*

Water demand for the Research Building is estimated to average approximately 60,480 gpd, based on water use rates for other comparable laboratory research facilities. The Research Building design will incorporate flow reduction devices and other water conservation measures to reduce water consumption.

The Research Building also includes construction of a chilled water plant which is required since new chilled water will not be available from MATEP, Dana-Farber's current supplier. It is estimated that on a yearly basis, the chiller plant will require an average of 33,800 gpd of water. Water use will average 79,100 gpd during the peak periods of July and August. This peak period has been factored into the yearly average of 33,800 gpd.

3. *Electricity Consumption*

Electrical requirements for the Research Building are estimated to be approximately 28,302,000 kilowatt hours per year.

4. *Energy Requirements*

Based on typical energy requirements for similar facilities, heating for the Research Building will total approximately 52,940 million Btu/year. Steam will be purchased from MATEP for heating purposes. Fossil fuel will be used to support the Research Building's emergency generators.

IV. COORDINATION WITH OTHER GOVERNMENTAL AGENCIES

A. Architectural Access Requirements

The Research Building project will conform with the requirements of the Americans With Disabilities Act and of the Massachusetts Architectural Access Board.

B. Massachusetts Environmental Policy Act

An Environmental Notification Form on the Research Building project is currently being prepared for submission to the Executive Office of Environmental Affairs.

V. PROJECT CERTIFICATION

Twenty-five (25) copies of this form have been submitted to the Boston Redevelopment Authority for distribution to all agencies and persons described in the Boston Zoning Code, Article 31, Section 31-5(1).

Signature of Proponent's
Representative

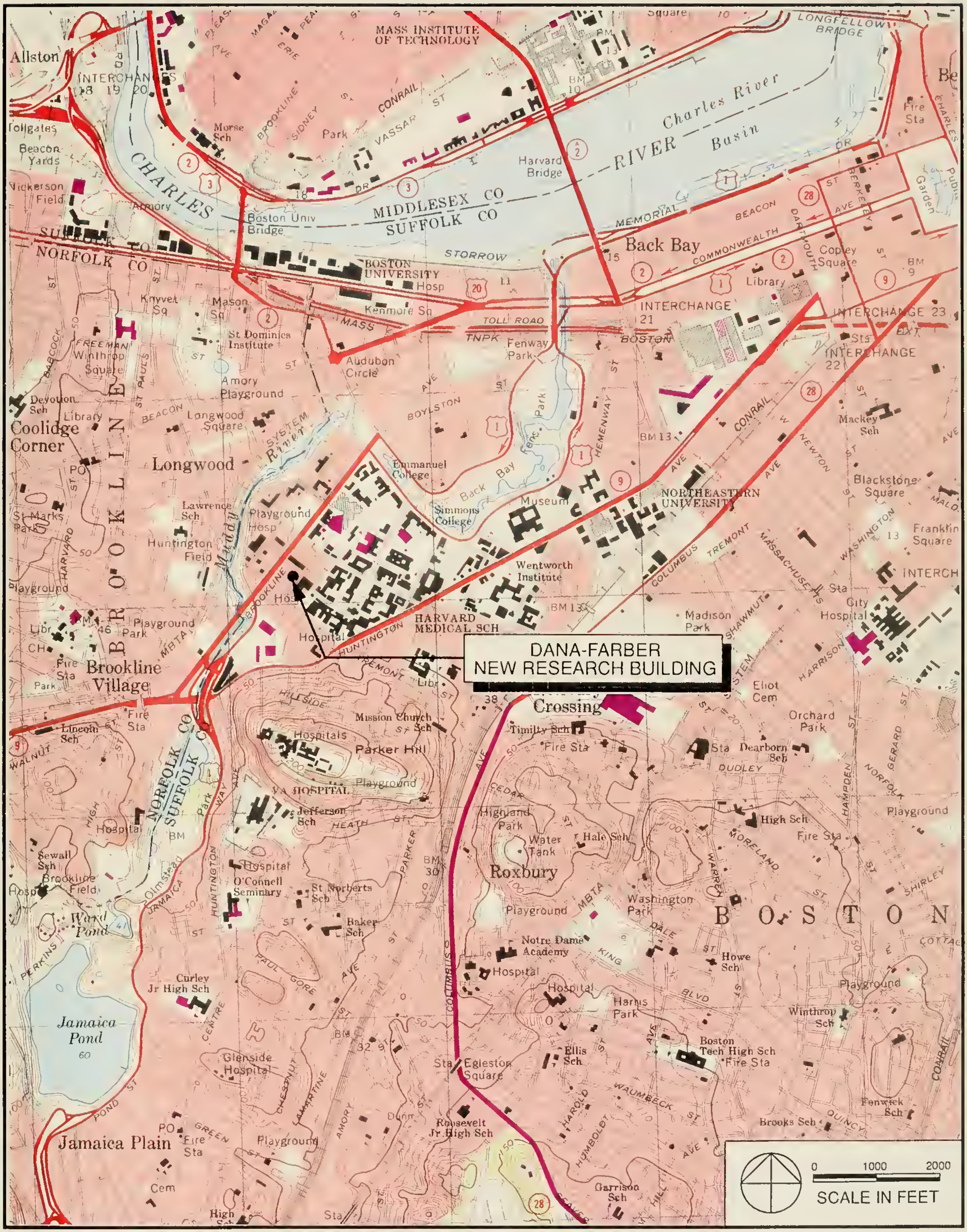
John W. Pettit
Chief Administrative Officer
Dana-Farber Cancer Institute
44 Binney Street
Boston, Massachusetts 02215

Mitchell

Signature of Person
Preparing PNF

Mitchell L. Fischman, AICP
Director of Environmental Planning
HMM Associates, Inc.
196 Baker Avenue
Concord, Massachusetts 01742

EXHIBITS



6862 5/3/93

EXHIBIT I
NEW RESEARCH BUILDING LOCATION MAP
DANA-FARBER CANCER INSTITUTE

HMM Associates, Inc.
A Summit Company

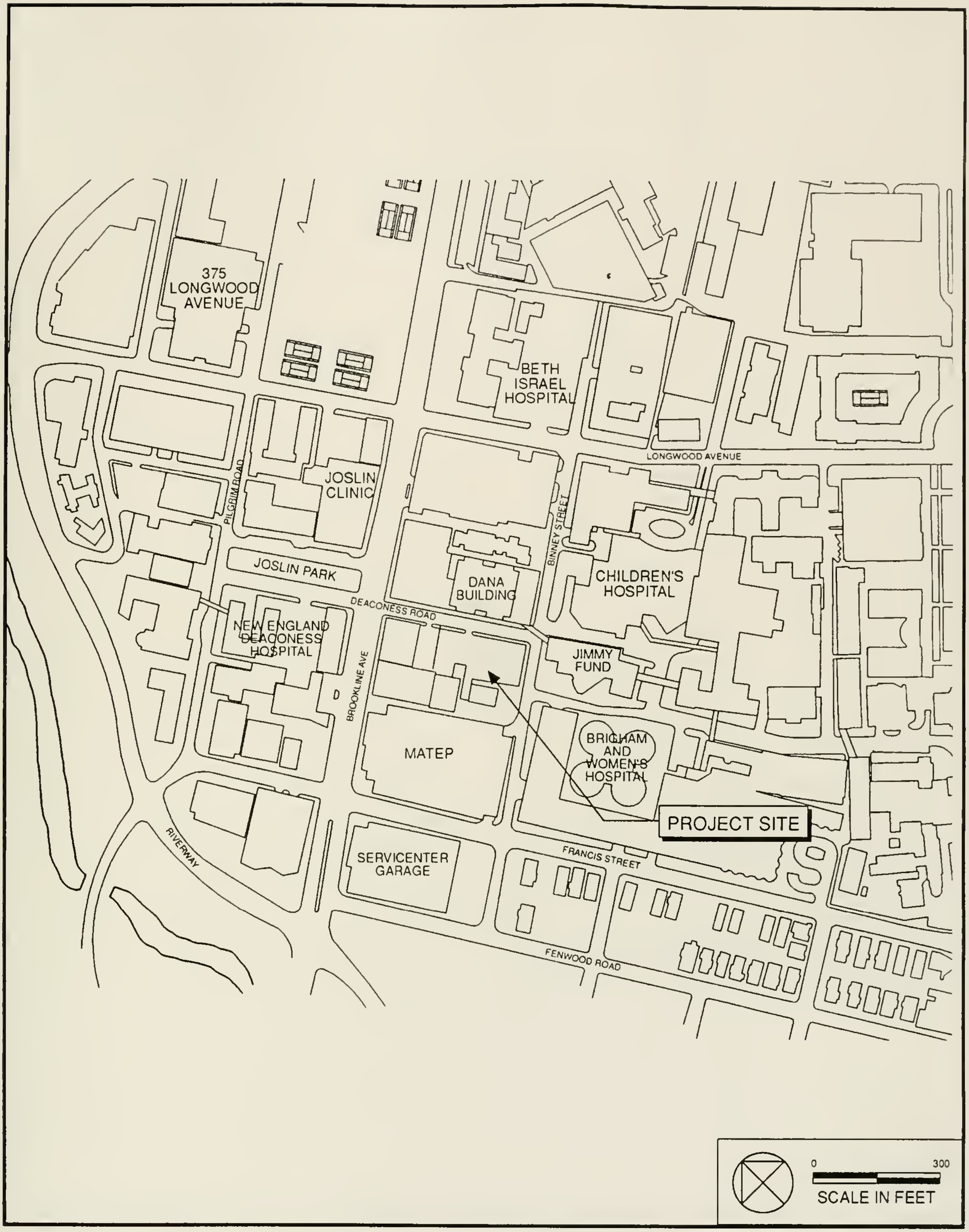


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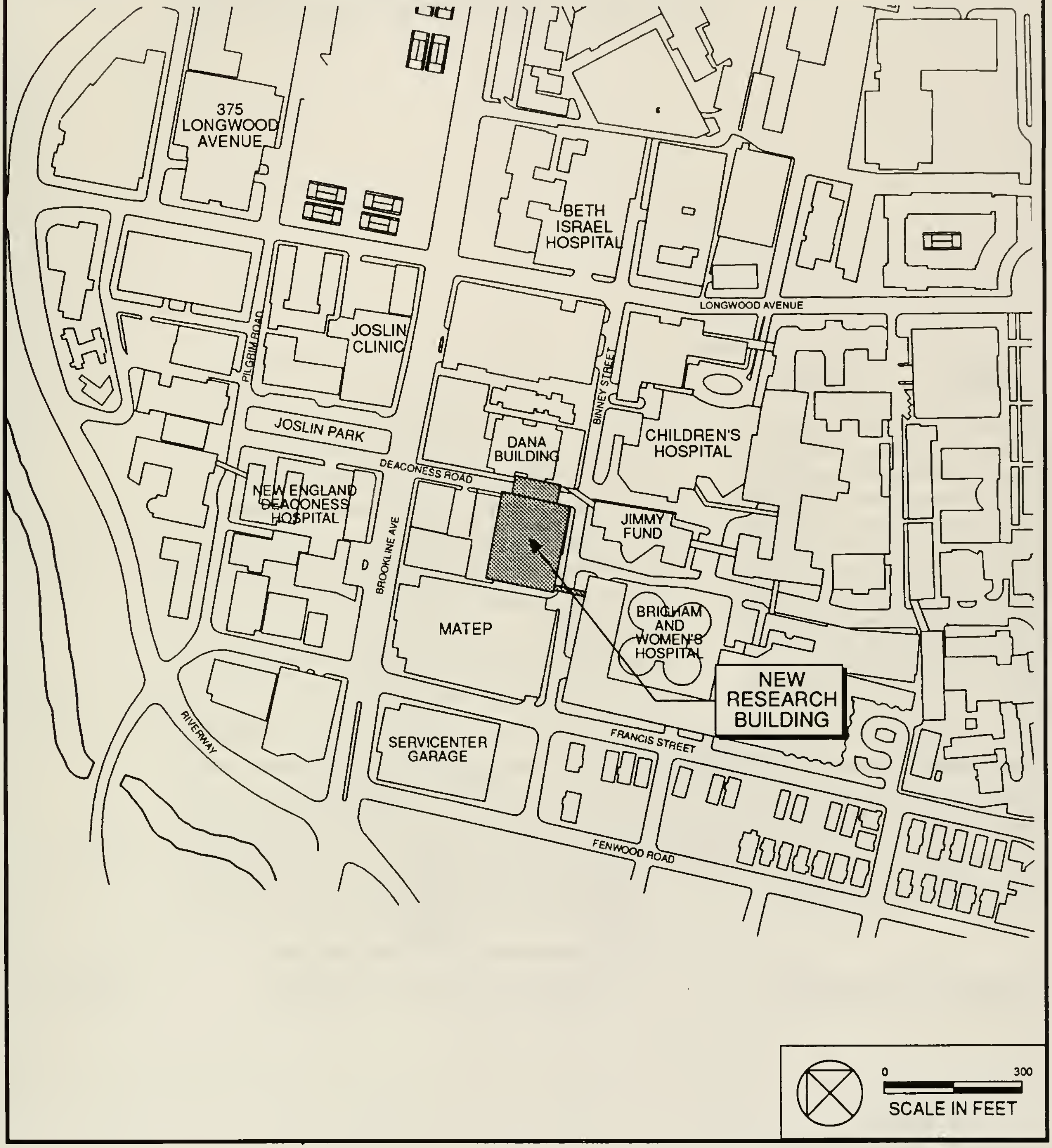
EXHIBIT 2
EXISTING SITE PLAN
DANA-FARBER CANCER INSTITUTE

HMM Associates, Inc.
A Summit Company



6862 5/3/93

EXHIBIT 3
SITE PLAN FOR NEW RESEARCH BUILDING
DANA-FARBER CANCER INSTITUTE

HMM Associates, Inc.
A Summit Company

DANA-FARBER CANCER INSTITUTE
NEW RESEARCH BUILDING
65 DEACONESS ROAD

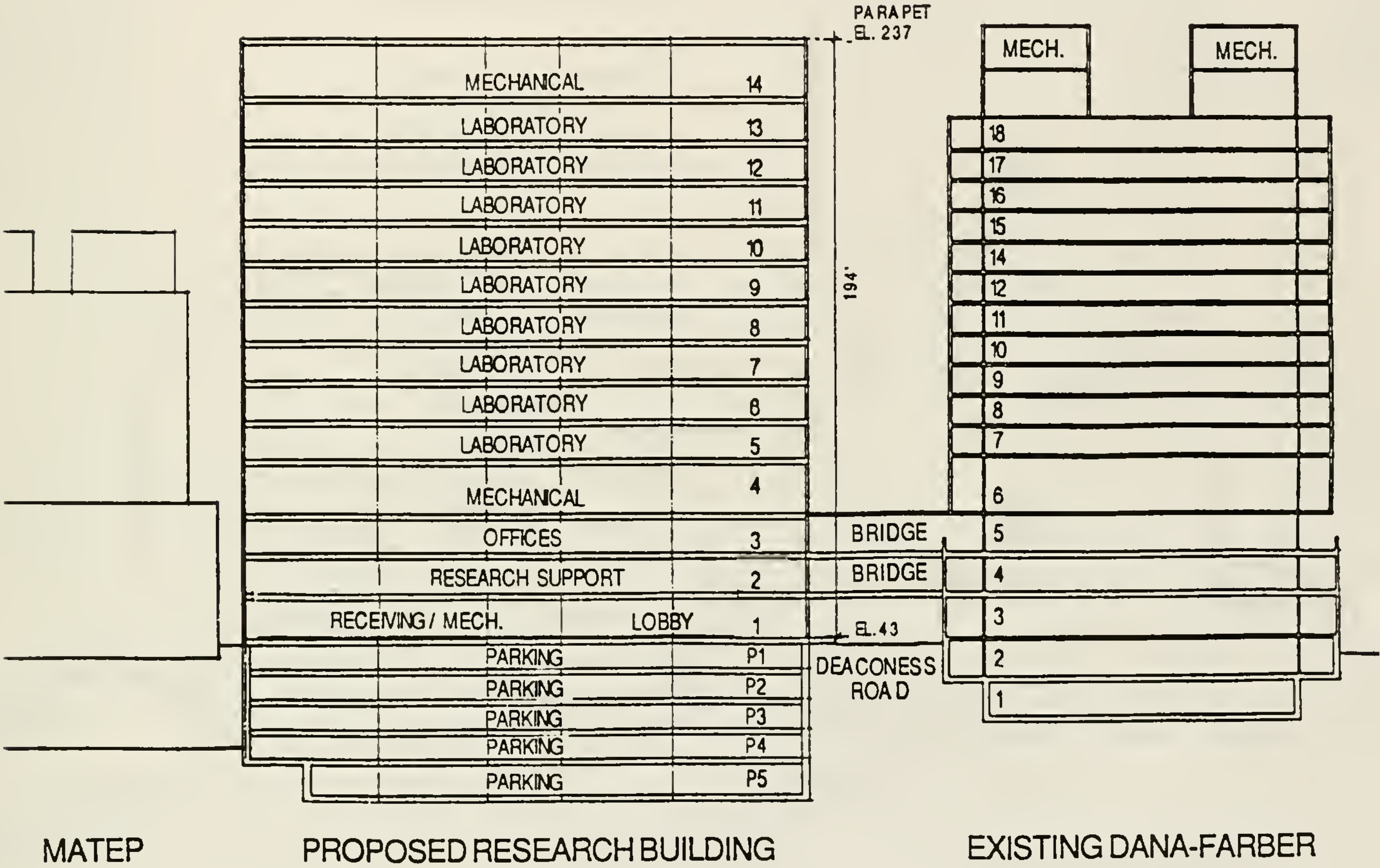


EXHIBIT 4
NORTH-SOUTH SECTION

SHEPLEY BULFINCH RICHARDSON AND ABBOTT
ARCHITECTS

DANA-FARBER CANCER INSTITUTE
NEW RESEARCH BUILDING
65 DEACONESS ROAD

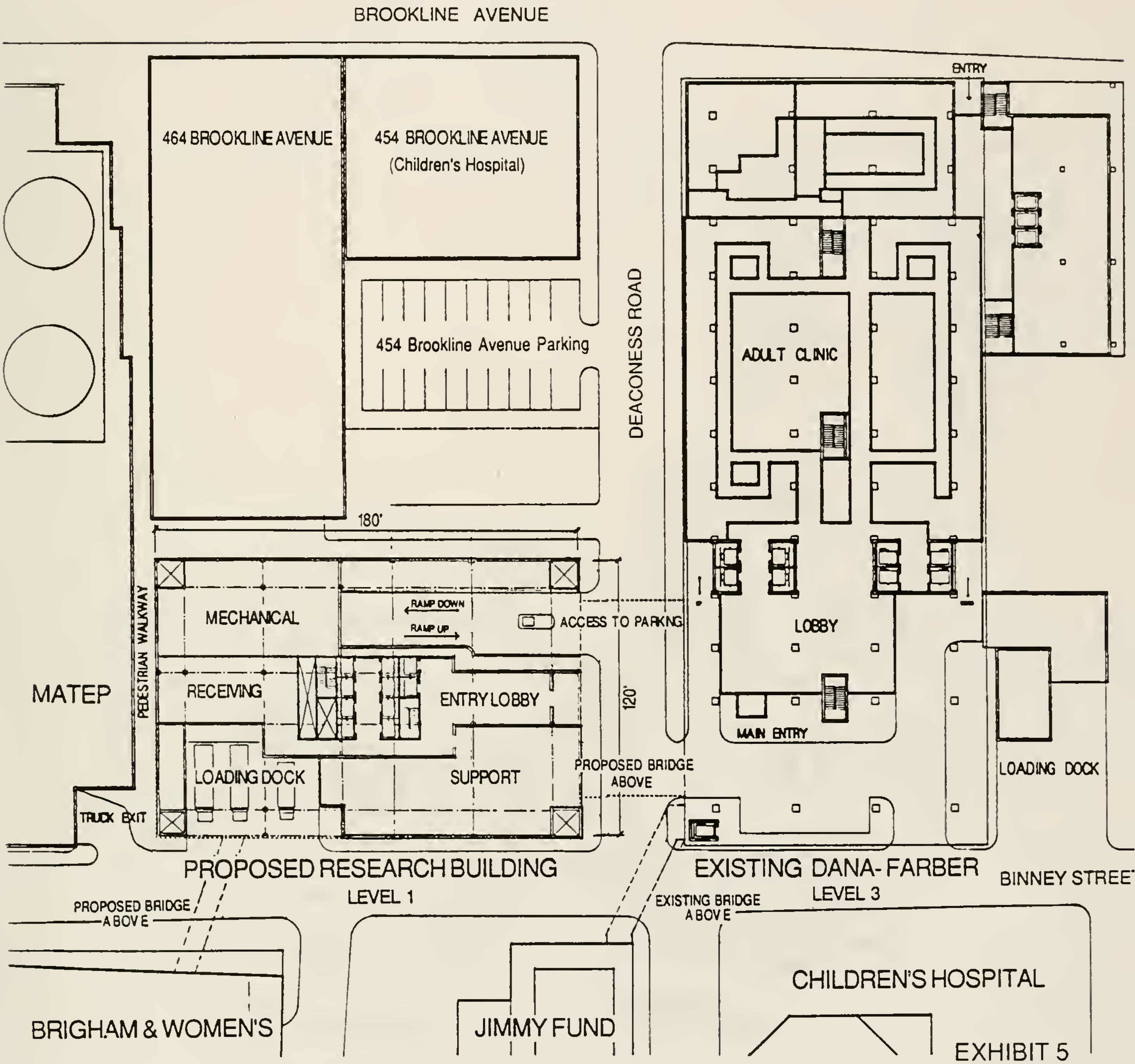


EXHIBIT 5

LEVEL 1

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ARCHITECTS

0 8 16 32

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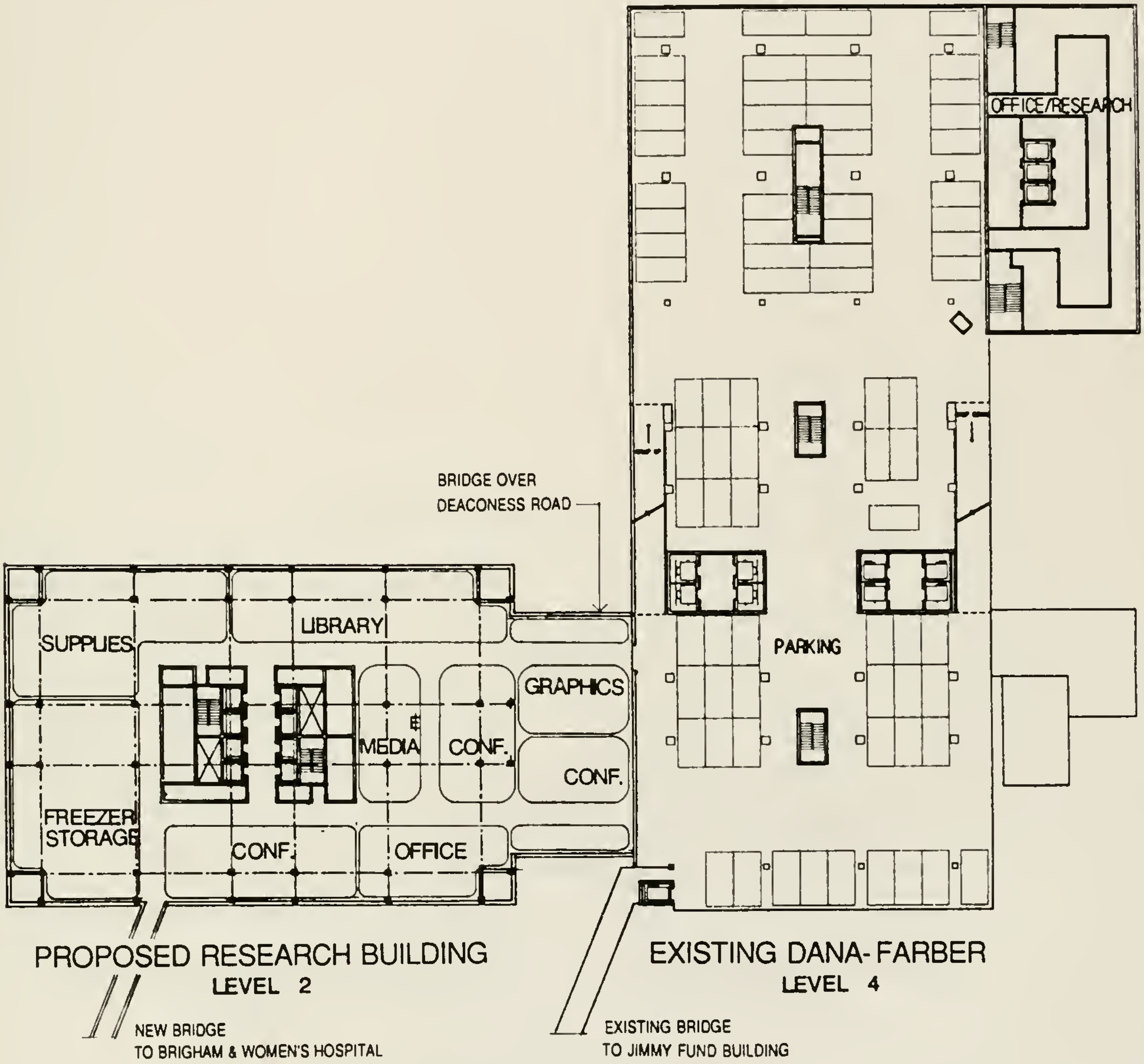

EXHIBIT 6

LEVEL 2

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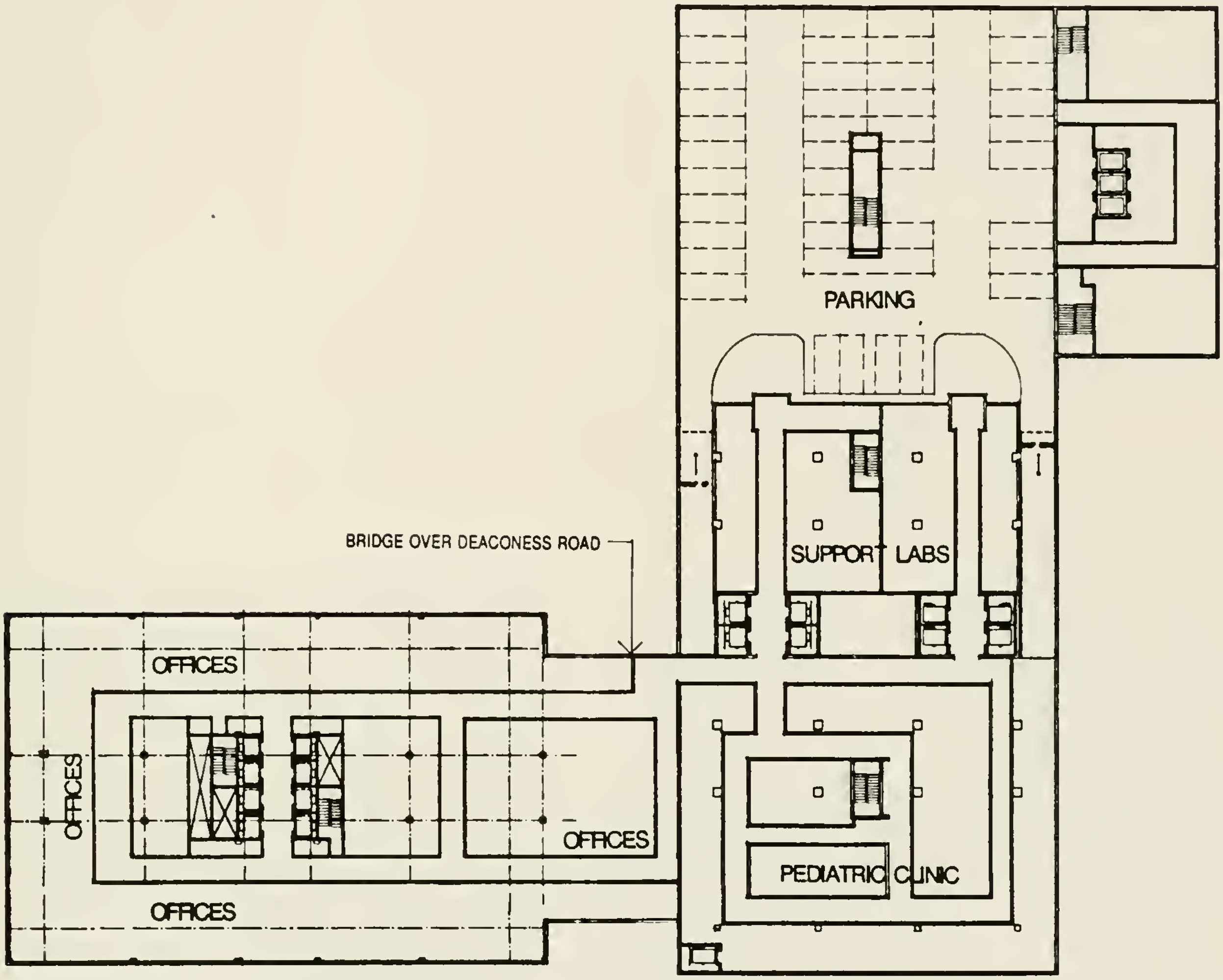

PROPOSED RESEARCH BUILDING
LEVEL 3

EXISTING DANA-FARBER
LEVEL 5

EXHIBIT 7

LEVEL 3

SHEPLEY BULFINCH RICHARDSON AND ABBOTT
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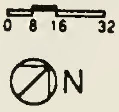

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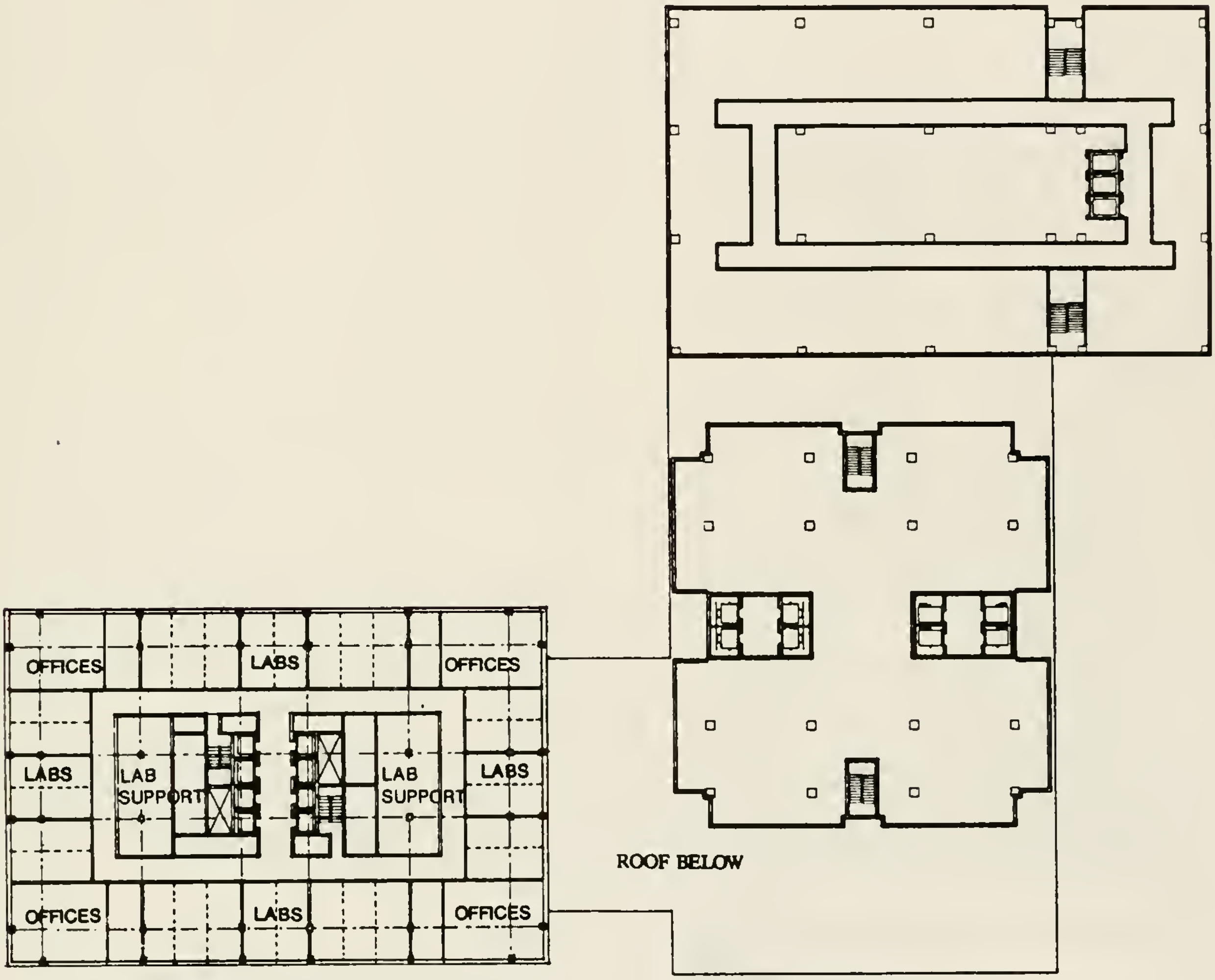

PROPOSED RESEARCH BUILDING EXISTING DANA-FARBER

EXHIBIT 8

TYPICAL LABORATORY FLOOR

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ARCHITECTS

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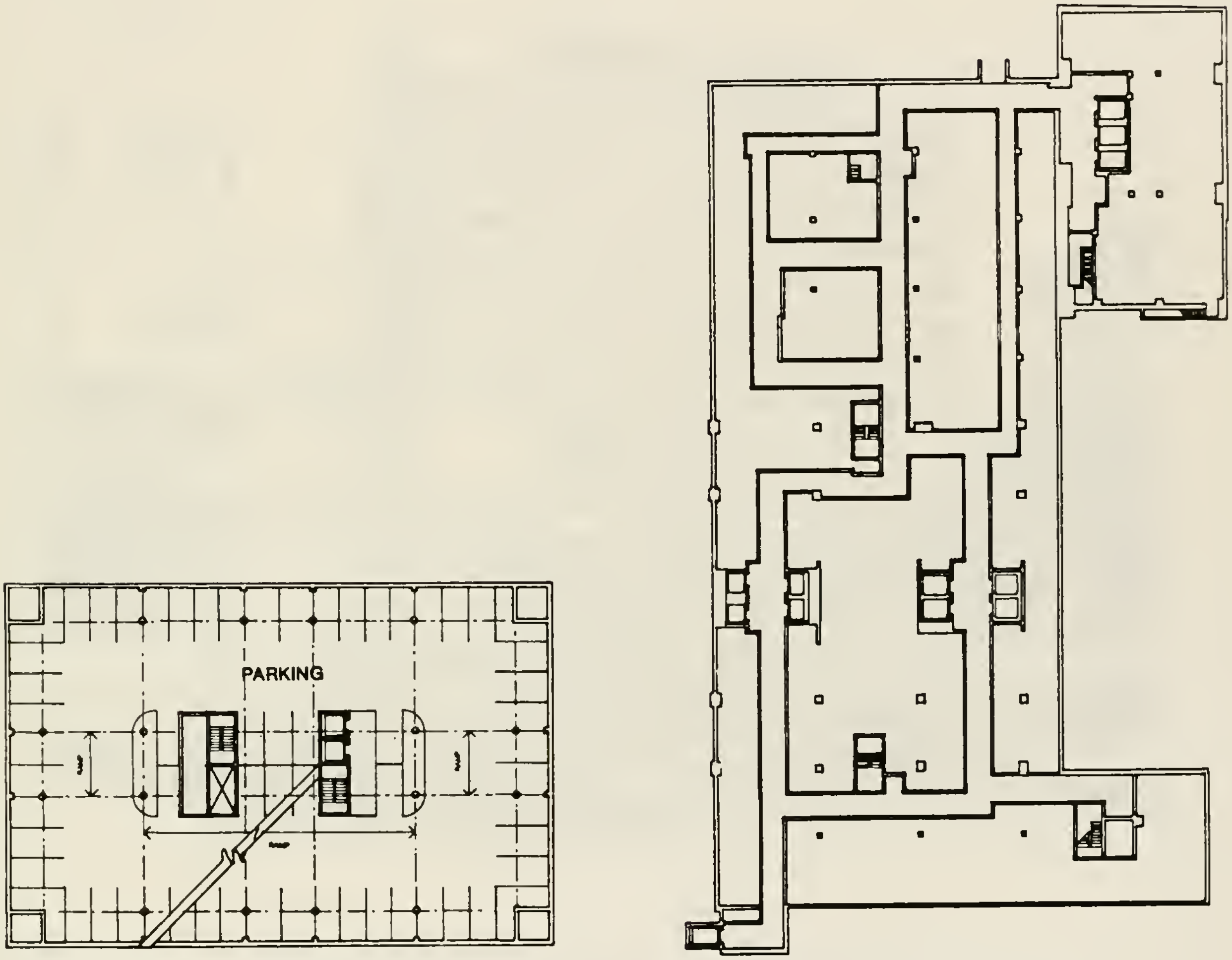

PROPOSED RESEARCH BUILDING

EXISTING DANA-FARBER

EXHIBIT 9
TYPICAL PARKING FLOOR

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ARCHITECTS

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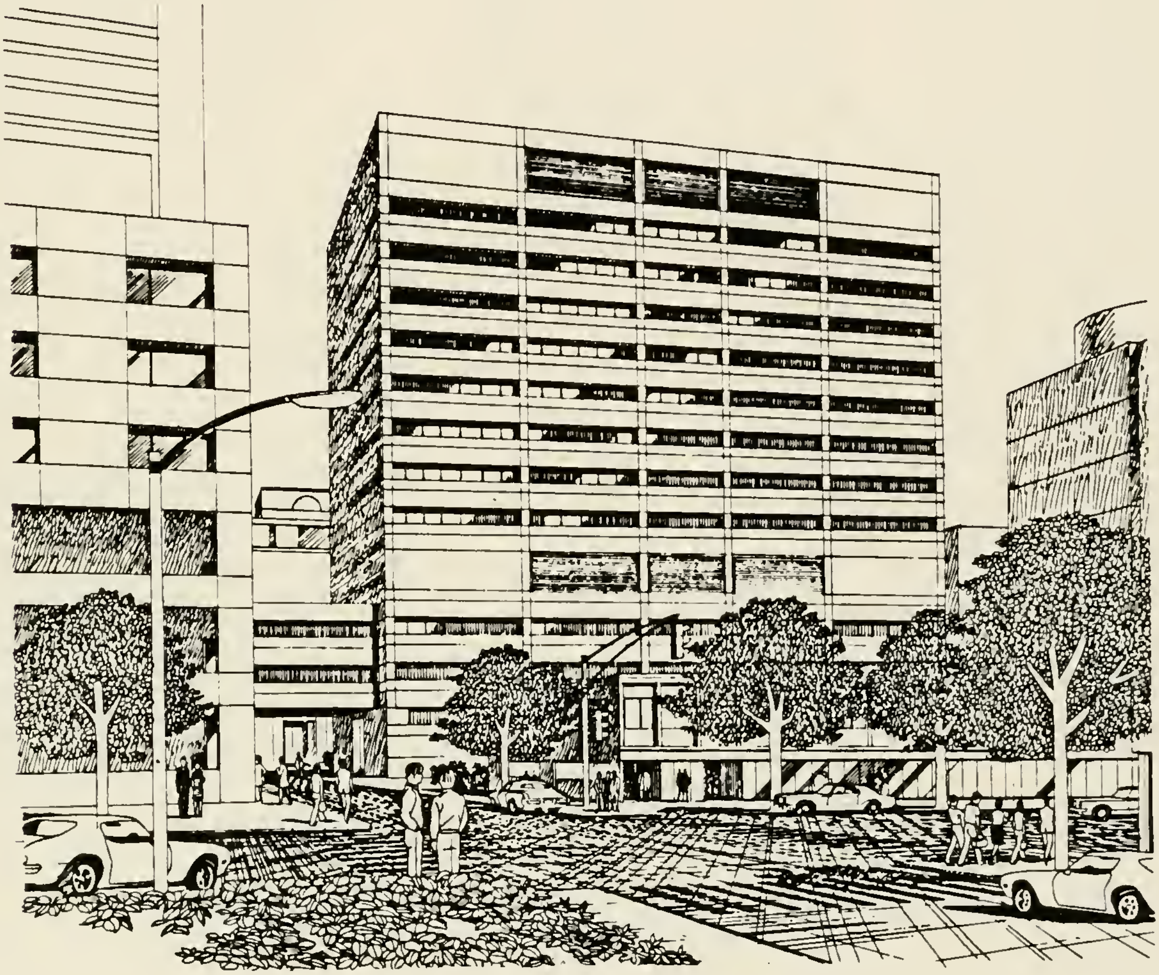

PERSPECTIVE FROM BROOKLINE AVENUE

EXHIBIT 10

SHEPLEY BULFINCH RICHARDSON AND ABBOTT
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